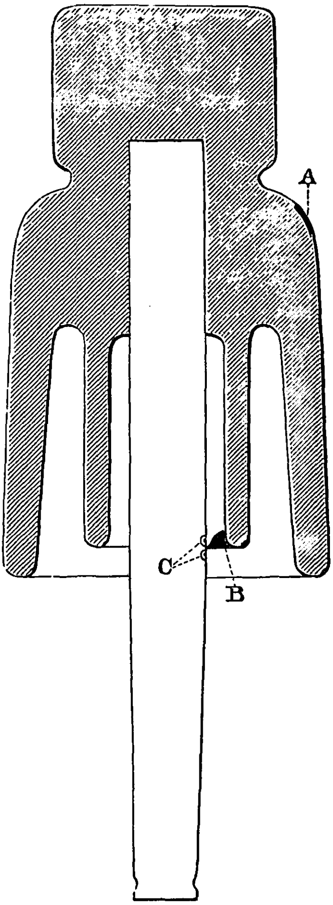
COMMUNICATION.

Calcutta, *November 19th*, 1894.

Dear Sir,—The following case of lightning happened on the telegraph line between Bombay and Bhusaval in October:—



One of the iron wires was broken, and the cause put down to lightning. As no insulators were smashed, the local superintendent, Mr. Kenyon, called for the ends of the wire, and had two of the white porcelain insulators on each side of the break removed for examination. Of the four insulators, one was cracked and the stalk loose. The other three appeared to be entirely undamaged, except that each had a little brown mark at the edge of the inner cup, in the position marked B in accompanying sketch; and on each stalk, at C just opposite, was a small mark about the size of a pin's head, with a little conical point in the centre, where the flash had apparently sparked across. There was also a brown mark at A where the wire binder touched the insulator. At each brown mark the glaze of the porcelain was destroyed, being reduced to a powder which disappeared in water. The three apparently undamaged insulators were tested after being immersed in water for 24 hours, and each gave an insulation resistance of over 5,000 megohms.

If the lightning went *through* the porcelain it would assuredly have destroyed the insulation; failing this, it must have passed over the whole surface of the porcelain to get from the line wire to the edge of the inner cup—which seems curious.

Yours truly,

P. V. LUKE,

Director, Construction Branch,
Indian Government Telegraphs.

THE SECRETARY,
Institution of Electrical Engineers.